

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions and listings of claims in this application.

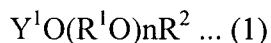
Listing of Claims:

Please cancel claims 5-12 without prejudice or disclaimer.

1. (Currently Amended) An A-cement admixture for cement comprising four components of a copolymer (A), an unsaturated (poly)alkylene glycol ether monomer (a), a non-polymerizable (poly)alkylene glycol (B) having no alkenyl group, and a polymer (C) having an oxyalkylene group or a polyoxyalkylene group and a carboxyl group, which is different from the copolymer (A), at ratios of the unsaturated (poly)alkylene glycol ether monomer (a) to the copolymer (A) in a range of 1 to 100% by mass, the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group to the copolymer (A) in a range of 1 to 50% by mass, and the polymer (C), which is different from the copolymer (A), having an oxyalkylene group or a polyoxyalkylene group and a carboxyl group to the copolymer (A) in a range of 1 to 10000% by mass,

wherein the copolymer (A) contains a constituent unit (I) derived from the unsaturated (poly)alkylene glycol ether monomer (a) and a constituent unit (II) derived from a maleic acid monomer (b) at ratios of the constituent unit (I) and the constituent unit (II) in a range of 1% by mass or more, respectively, in the entire constituent units,

and the unsaturated (poly)alkylene glycol ether monomer (a) is represented by the general formula (1):



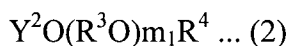
(wherein Y^1 represents an alkenyl group containing 2 to 4 carbon atoms, R^2 represents a hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms, R^1O represents one or more species of oxyalkylene groups containing 2 to 18 carbon atoms, and n represents the average molar number of addition of the oxyalkylene groups and is a number of 1 to 500).

2. (Currently Amended) An A-cement admixture for cement comprising five components of a copolymer (A1), a copolymer (A2), an unsaturated (poly)alkylene glycol ether

monomer (a1), an unsaturated polyalkylene glycol ether monomer (a2), and a non-polymerizable (poly)alkylene glycol (B) having no alkenyl group at ratios of the total amount of the unsaturated (poly)alkylene glycol ether monomer (a1) and the unsaturated polyalkylene glycol ether monomer (a2) to the total amount of the copolymers (A1) and (A2) in a range of 1 to 100% by mass, the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group to the total amount of the copolymers (A1) and (A2) in a range of 1 to 50% by mass, and the polymer (A2) to the copolymer (A1) in a range of 1 to 10000% by mass,

wherein the copolymer (A1) contains a constituent unit (I') derived from the unsaturated (poly)alkylene glycol ether monomer (a1) and a constituent unit (II) derived from a maleic acid monomer (b) at ratios of the constituent unit (I') and the constituent unit (II) in a range of 1% by mass or more, respectively, in the entire constituent units,

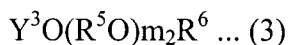
the unsaturated (poly)alkylene glycol ether monomer (a1) is represented by the general formula (2):



{wherein Y^2 represents an alkenyl group containing 2 to 4 carbon atoms, R^4 represents a hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms, R^3O represents one or more species of oxyalkylene groups containing 2 to 18 carbon atoms, and m_1 represents the average molar number of addition of the oxyalkylene groups and is a number of 1 to 100},

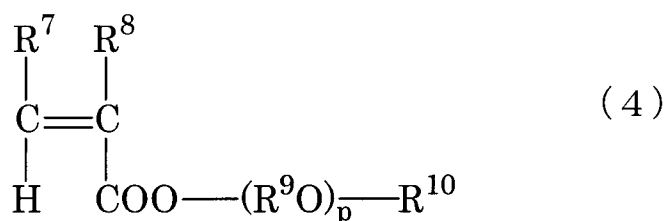
the copolymer (A2) contains a constituent unit (I'') derived from the unsaturated polyalkylene glycol ether monomer (a2) and a constituent unit (II) derived from a maleic acid monomer (b) at ratios of the constituent unit (I'') and the constituent unit (II) in a range of 1% by mass or more, respectively, in the entire constituent units, and

the unsaturated polyalkylene glycol ether monomer (a2) is represented by the general formula (3):



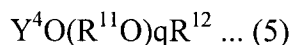
{wherein Y^3 represents an alkenyl group containing 2 to 4 carbon atoms, R^6 represents a hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms, R^5O represents one or more species of oxyalkylene groups containing 2 to 18 carbon atoms, and m_2 represents the average molar number of addition of the oxyalkylene groups and is a number of 6 to 500, in which $m_2 - m_1 \geq 5$ }.

3. (Currently Amended) The ~~cement~~ admixture for cement according to Claim 1, wherein the polymer (C) is a polymer (D) containing a constituent unit (IV) derived from a (poly)alkylene glycol mono(meth)acrylic acid ester monomer (d) and a constituent unit (V) derived from an unsaturated monocarboxylic acid monomer (e) at ratios of the constituent units (IV) and (V) in a range of 1% by mass or more, respectively, in the entire constituent units, and the (poly)alkylene glycol mono(meth)acrylic acid ester monomer (d) is represented by the general formula (4):



(wherein R^7 and R^8 are the same or different and each represents a hydrogen atom or a methyl group, R^{10} represents a hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms, R^9O represents one or more species of oxyalkylene groups containing 2 to 18 carbon atoms, and p represents the average molar number of addition of the oxyalkylene groups and is a number of 1 to 500).

4. (Currently Amended) The ~~cement~~ admixture for cement according to Claim 1, wherein the polymer (C) is a polymer (E) containing a constituent unit (VI) derived from an unsaturated (poly)alkylene glycol ether monomer (f) and a constituent unit (II) derived from a maleic acid monomer (b) at ratios of the constituent units (VI) and (II) in a range of 1% by mass or more, respectively, in the entire constituent units, and the unsaturated (poly)alkylene glycol ether monomer (f) is represented by the general formula (5):



(wherein Y^4 represents an alkenyl group containing 5 to 8 carbon atoms, R^{12} represents a hydrogen atom or a hydrocarbon group containing 1 to 30 carbon atoms, R^{11}O represents one or

more species of oxyalkylene groups containing 2 to 18 carbon atoms, and q represents the average molar number of addition of the oxyalkylene groups and is a number of 1 to 500).

5-12 (Canceled)

13. (New) The admixture for cement according to Claim 1,
wherein the polymer (C) is a copolymer (A') containing a constituent unit (I) derived from an unsaturated (poly) alkylene glycol ether monomer (a) and a constituent unit (II) derived from a maleic acid monomer (b) at ratios of the constituent unit (I) and the constituent unit (II) in a range of 1% by mass or more, respectively, in the entire constituent units,
and the unsaturated (poly) alkylene glycol ether monomer (a) is represented by the above-mentioned formula (1),
and a number of milliequivalents of carboxyl groups contained in each gram of copolymer (A') (meq/g) as determined on the unneutralized basis is 0.1 or more larger than the number of the copolymer (A).

14. (New) The admixture for cement according to Claim 1,
wherein the oxyalkylene group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 18 carbon atoms, and the terminal group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is a hydrogen atom, an alkyl group or an (alkyl)phenyl group containing 1 to 30 carbon atoms.

15. (New) The admixture for cement according to Claim 2,
wherein the oxyalkylene group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 8 carbon atoms, and the terminal group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is a hydrogen atom, an alkyl group or an (alkyl)phenyl group containing 1 to 30 carbon atoms.

16. (New) The admixture for cement according to Claim 3,

wherein the oxyalkylene group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 8 carbon atoms, and the terminal group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is a hydrogen atom, an alkyl group or an (alkyl)phenyl group containing 1 to 30 carbon atoms.

17. (New) The admixture for cement according to Claim 4,
wherein the oxyalkylene group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 8 carbon atoms, and the terminal group of the non-polymerizable (poly)alkylene glycol (B) having no alkenyl group is a hydrogen atom, an alkyl group or an (alkyl)phenyl group containing 1 to 30 carbon atoms.

18. (New) The admixture for cement according to claim 1
wherein the oxyalkylene group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 8 carbon atoms, and the oxyalkylene group comprises the oxyethylene group accounting for at least 50 mole percent, and
the terminal group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is a hydrogen atom or an alkyl group containing 1 to 4 carbon atoms.

19. (New) The admixture for cement according to claim 2
wherein the oxyalkylene group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 8 carbon atoms, and the oxyalkylene group comprises the oxyethylene group accounting for at least 50 mole percent, and
the terminal group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is a hydrogen atom or an alkyl group containing 1 to 4 carbon atoms.

20. (New) The admixture for cement according to claim 3

wherein the oxyalkylene group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is one or more species of oxyalkylene groups containing 2 to 8 carbon atoms, and the oxyalkylene group comprises the oxyethylene group accounting for at least 50 mole percent, and

the terminal group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is a hydrogen atom or an alkyl group containing 1 to 4 carbon atoms.

21. (New) The admixture for cement according to claim 18,

wherein the oxyalkylene group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group, comprises the oxyethylene group accounting for at least 90 mole percent, and

the terminal group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is a hydrogen atom.

22. (New) The admixture for cement according to claim 19,

wherein the oxyalkylene group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group, comprises the oxyethylene group accounting for at least 90 mole percent, and

the terminal group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is a hydrogen atom.

23. (New) The admixture for cement according to claim 20,

wherein the oxyalkylene group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group, comprises the oxyethylene group accounting for at least 90 mole percent, and

the terminal group of the non-polymerizable (poly) alkylene glycol (B) having no alkenyl group is a hydrogen atom.

24. (New) The admixture for cement according to claim 1,

wherein R^2 in the formula (1) is a hydrogen atom.

25. (New) The admixture for cement according to claim 2, wherein R^2 in the formula (1) is a hydrogen atom.
26. (New) The admixture for cement according to claim 3, wherein R^2 in the formula (1) is a hydrogen atom.
27. (New) A cement composition comprising the admixture for cement according to Claim 1, cement and water.
28. (New) A cement composition comprising the admixture for cement according to Claim 2, cement and water.
29. (New) A cement composition comprising the admixture for cement according to Claim 3, cement and water.
30. (New) A cement composition comprising the admixture for cement according to Claim 4, cement and water.